

The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled))
8. (Canceled)
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Currently amended): A microfluidic bi-directional capillary electrophoresis device,
comprising:
a middle column;
the middle column intersecting a first uncharged channel having a coating and a second uncharged channel having a coating at an intersection point wherein the middle column is approximately perpendicular to the first uncharged channel and the second uncharged channel wherein the coating of the first channel and the coating of the second channel is applied in an amount to substantially eliminate sample loss;
the first uncharged channel engaged to a first microfluidic system for proteome analysis;
and

a negative electrode in communication with the first uncharged channel and a positive electrode in communication with the second uncharged channel,

wherein a mixture of anions and cations may be separated by drawing the cations toward the negative electrode and drawing the anions towards the positive electrode.

13. (Canceled)

14. (Previously presented): The device of claim 12 wherein the second uncharged channel is engaged to a second microfluidic system for proteome analysis.

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Previously presented): The device of claim 16 wherein the coating is TRITON X-100® (4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol.

19. (Original): The device of claim 12 wherein a detector is in communication with the first uncharged channel.

20. (Original): The device of claim 12 wherein a first detector is in communication with the first uncharged channel to detect cations and a second detector is in communication with the second uncharged channel to detect anions.

21. (Original): The device of claim 12 further comprising a hydrodynamic flow resistor positioned in the first uncharged channel.

22. (Original): The device of claim 12 further comprising a pressure outlet.

23. (Original): The device of claim 12 wherein a dual channel detector is in communication with the first uncharged channel and the second uncharged channel.

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (Canceled)

33. (Currently amended): A method of separating a sample of anions and cations on a microfluidic device, comprising:

delivering the sample to a middle column of a bi-directional capillary electrophoresis device;

providing a first uncharged channel having a coating and a second uncharged channel having a coating approximately perpendicular to the middle column wherein the middle column intersects the first uncharged channel and the second uncharged channel at an intersection point wherein the coating of the first channel and the coating of the second channel is applied in an amount to substantially eliminate sample loss;

engaging the first uncharged channel to a first microfluidic system for proteome analysis;

positioning a negative electrode in communication with the first uncharged channel thereby drawing cations into the first uncharged channel; and

positioning a positive electrode in communication with the second uncharged channel thereby drawing anions into the second uncharged channel.

34. (Canceled)

35. (Canceled)

36. (Canceled)

37. (Previously presented): The method of claim 35 wherein the coating is TRITON X-100® (4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol.

38. (Original): The method of claim 33 further comprising:

placing a detector in communication with the first uncharged channel to detect cations.

39. (Original): The method of claim 38 further comprising:

placing a detector in communication with the second uncharged channel to detect anions.

40. (Original): The method of claim 33 further comprising:

placing a dual channel detector in communication with the first uncharged channel and the second uncharged channel.

41. (Original): The method of claim 33 further comprising:

placing a hydrodynamic flow resistor in communication with the first uncharged channel.

42. (Canceled)

43. (Previously presented): The method of claim 33 further comprising:

engaging the second uncharged channel to a second microfluidic proteome analysis system.